

Observations of the Great Comet (b) 1882, made at the O'Gyalla Observatory, Hungary. By Dr. N. de Konkoly.

The comet, when first observed, had already lost much of its former brightness, and until November 1 all observation was prevented by continuous clouds and rainy weather. Since that time I have seen it only once between clouds, but observations then were too difficult to make. Our moist climate, together with a considerable diminution in the brightness of the comet, gives but little hope for further observations.

The observations were made on November 1, 17^h Mean Time, with the 6'' Refractor of Merz, the view from the 9½-in. Merz Refractor being limited by the dome of the 6-in. and by trees.

In the telescope the head of the comet was very remarkable. Its oblong nucleus sharply defined towards the tail, showed two brighter points of light. The nucleus appeared of a pretty strong yellow colour, while the coma was a little greenish. The tail was considerably curved upwards, and the edge turned towards the horizon was much brighter and better defined than the other. A radiation from the nucleus, which large comets generally show, did not exist, and the whole head of the comet appeared like a candlelight seen through fog. The edges, even of the nucleus, were exceedingly indefinite. The spectrum was compared with that of a Bunsen gas flame according to the method of Professor Vogel. The nucleus had a very intense continuous spectrum, the red end of which was very bright. I could not see any sodium line. The coma showed a tolerably bright comet spectrum, characterised by the hydrocarbon bands. Later in the morning the view being more open from the northern dome, the observations were made with the large refractor. I measured three of the bands, intended to measure a fourth, and suspected a fifth towards the red. Taking the intensity of the brightest band in the yellow-green as unity, the ratio of the intensities of the others is: 0.1 (?), 0.7, 1.0, 0.2, and 0.4. The first is the suspected band in the red. The following are the results expressed in wave-lengths.

			Mm.
I.	...	...	—
II.	...	...	562.0
III.	...	...	514.7
IV.	...	...	502.6 (?)
V.	...	...	472.

All lines seemed much thickened in the middle, and better defined toward the less refrangible end of the spectrum, while fainter toward the violet. The measurements of the spectrum of the Bunsen flame gave the following results:—

			Edge.	Maximum.
I.	...	...	610°0	596°2
II.	...	...	560°2	556°9
III.	...	...	514°7	513°1
IV.	...	...	472°2	469°9
V.	...	...	—	431°4

The little discordance between the two spectra perhaps may be explained by the small dispersion of the apparatus employed.

O'Gyalla Observatory:
1882, Nov. 12.

Observations of the Great Comet (b) 1882, made on board H.M.S.
"Triumph." By the Rev. Joseph Reed.

This interesting object was first seen and reported on Sunday, September 10. On Monday rain and clouds prevented its being seen; but on the 12th and 13th I was fortunately able to take observations to determine its R.A. and Declination, but these results are approximate, the sextant and compass being the only instruments available. Each morning, owing to banks of cloud and the increasing twilight, the comet was visible for only a few minutes before sunrise; the twilight prevented my determining the length of the tail, but it appeared to extend through an arc of two or two and a half degrees. The whole of the coma is very brilliant, the nucleus surrounded by a still brighter ring; the tail was not curved.

1882, September 12.

Latitude	...	...	...	°	11	12	"	0	N.
Longitude	...	...	...	24	40	0	W.		
					^h	^m	^s		
Ship's Time of Observation	...			5	22	18	A.M.		
True Altitude of Nucleus	...			8	28	36			
					^h	^m	^s		
R.A. of Comet	...	...	...	11	25	3			
Declination of Comet	...	...	...	°	4	10	"	23	S.

1882, September 13.

Latitude	...	...	...	°	13	54	"	0	N.
Longitude	...	...	...	24	20	0	W.		
					^h	^m	^s		
Ship's Time of Observation	...			5	11	20	A.M.		
True Altitude of Nucleus	...			4	14	47			
					^h	^m	^s		
R.A. of Comet	...	...	...	10	58	24			
Declination of Comet	...	...	...	°	54	58			